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EXAMINER	
CHAU, COREY P	
ART UNIT	**PAPER NUMBER**
2615	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,797	SUZUKI, SHINJI	
	Examiner	Art Unit	
	Corey P. Chau	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/25/06,9/12/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6856688 to Cromer et al. (hereafter as Cromer).

3. Regarding Claim 1, Cromer discloses a multichannel reproducing apparatus in which audio signals from a plurality of channels are processed, and processed audio

signals of said plurality of channels are supplied to and reproduced on loudspeakers respectively disposed for each one of said plurality of channels, said multichannel reproducing apparatus (Figs. 1-3) comprising:

a loudspeaker drive section for driving each one of loudspeakers by imparting a specific delay time to an audio signal on each one of said plurality of channels (Figs. 1-3; column 2, line 60 to column 3, line 2;column 4, lines 18-26; column 4, lines 46-53);

a test tone generating section for generating a test tone used to measure a distance between said loudspeakers and supplying said test tone thus generated to one of said loudspeakers (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67);

a transmission time measuring section for measuring a time period taken from a time when said test tone is generated by said one of said loudspeakers until a time when said test tone is received by other loudspeakers, thus obtaining a transmission time between loudspeakers (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67; column 4, lines 18-53); and

a loudspeaker position calculating section for calculating a coordinate position of each one of said loudspeakers based upon said transmission time between loudspeakers (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67; column 4, lines 18-53).

4. Regarding Claim 2, Cromer discloses a multichannel reproducing apparatus in which audio signals from a plurality of channels are processed, and processed audio signals of said plurality of channels are supplied to and reproduced on loudspeakers

respectively disposed for each one of said plurality of channels, said multichannel reproducing apparatus (Figs. 1-3) comprising:

a loudspeaker drive section for driving each one of loudspeakers by imparting a specific delay time to an audio signal on each one of said plurality of channels (Figs. 1-3; column 2, line 60 to column 3, line 2;column 4, lines 18-26; column 4, lines 46-53);

a test tone generating section for generating a test tone used to measure a distance between said loudspeakers and supplying said test tone thus generated to one of said loudspeakers (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67);

a transmission time measuring section for measuring a time period taken from a time when said test tone is generated by said one of said loudspeakers until a time when said test tone is received by other loudspeakers, thus obtaining a transmission time between loudspeakers (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67; column 4, lines 18-53);

a loudspeaker position calculating section for calculating a coordinate position of each one of said loudspeakers based upon said transmission time between loudspeakers (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67; column 4, lines 18-53); and

a listening position input section for inputting a listening position in relation to a coordinate position calculated by said loudspeaker position calculating section (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67; column 4, lines 1-53).

5. Regarding Claim 3, Cromer discloses a multichannel reproducing apparatus in which audio signals from a plurality of channels are processed, and processed audio

signals of said plurality of channels are supplied to and reproduced on loudspeakers respectively disposed for each one of said plurality of channels, said multichannel reproducing apparatus (Figs. 1-3) comprising:

a loudspeaker drive section for driving each one of speakers by imparting a specific delay time to an audio signal on each one of said plurality of channels (Figs. 1-3; column 2, line 60 to column 3, line 2;column 4, lines 18-26; column 4, lines 46-53);

a test tone generating section for generating a test tone used to measure a distance between said loudspeakers and supplying said test tone thus generated to one of said loudspeakers (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67);

a transmission time measuring section for measuring a time period taken from a time when said test tone is generated by said one of said loudspeakers until a time when said test tone is received by other loudspeakers, thus obtaining a transmission time between loudspeakers (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67; column 4, lines 18-53);

a loudspeaker position calculating section for calculating a coordinate position of each one of said loudspeakers based upon said transmission time between loudspeakers(Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67; column 4, lines 18-53); and

a listening position input section for inputting a listening position in relation to a coordinate position calculated by said loudspeaker position calculating section (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67; column 4, lines 18-53),

wherein said loudspeaker position calculating section calculates a transmission time or a distance between said listening position and each one of said loudspeakers based upon said listening position (Figs. 1-3; column 2, lines 25-59; column 3, lines 3-67; column 4, lines 18-53).

6. Regarding Claim 4, Cromer discloses a delay time imparted to said loudspeaker drive section is calculated based upon said transmission time or distance which is between said listening position and each loudspeaker and calculated by said loudspeaker position calculating section (Figs. 1-3; column 2, line 60 to column 3, line 2; column 4, lines 18-26; column 4, lines 1-53).

7. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 7123731 to Cohen et al. (hereafter as Cohen)(WO01/67814 published date: Sept. 13, 2001).

8. Regarding Claim 1, Cohen discloses a multichannel reproducing apparatus in which audio signals from a plurality of channels are processed, and processed audio signals of said plurality of channels are supplied to and reproduced on loudspeakers respectively disposed for each one of said plurality of channels, said multichannel reproducing apparatus (Figs. 1-4 and 8-13) comprising:

a loudspeaker drive section for driving each one of loudspeakers by imparting a specific delay time to an audio signal on each one of said plurality of channels (abstract; Figs. 1-4 and 8-13; column 6, lines 17-43);

a test tone generating section for generating a test tone used to measure a distance between said loudspeakers and supplying said test tone thus generated to one of said loudspeakers (abstract; Figs. 1-4 and 8-13; column 5, line 19 to column 6, line 8);

a transmission time measuring section for measuring a time period taken from a time when said test tone is generated by said one of said loudspeakers until a time when said test tone is received by other loudspeakers, thus obtaining a transmission time between loudspeakers (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 8); and

a loudspeaker position calculating section for calculating a coordinate position of each one of said loudspeakers based upon said transmission time between loudspeakers (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 55).

9. Regarding Claim 2, Cohen discloses a multichannel reproducing apparatus in which audio signals from a plurality of channels are processed, and processed audio signals of said plurality of channels are supplied to and reproduced on loudspeakers respectively disposed for each one of said plurality of channels, said multichannel reproducing apparatus (Figs. 1-4 and 8-13) comprising:

a loudspeaker drive section for driving each one of loudspeakers by imparting a specific delay time to an audio signal on each one of said plurality of channels (abstract; Figs. 1-4 and 8-13; column 6, lines 17-43);

a test tone generating section for generating a test tone used to measure a distance between said loudspeakers and supplying said test tone thus generated to one of said loudspeakers (abstract; Figs. 1-4 and 8-13; column 5, line 19 to column 6, line 8);

a transmission time measuring section for measuring a time period taken from a time when said test tone is generated by said one of said loudspeakers until a time when said test tone is received by other loudspeakers, thus obtaining a transmission time between loudspeakers (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 8);

a loudspeaker position calculating section for calculating a coordinate position of each one of said loudspeakers based upon said transmission time between loudspeakers (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 55); and

a listening position input section for inputting a listening position in relation to a coordinate position calculated by said loudspeaker position calculating section (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 55).

10. Regarding Claim 3, Cohen discloses a multichannel reproducing apparatus in which audio signals from a plurality of channels are processed, and processed audio signals of said plurality of channels are supplied to and reproduced on loudspeakers respectively disposed for each one of said plurality of channels, said multichannel reproducing apparatus (Figs. 1-4 and 8-13) comprising:

a loudspeaker drive section for driving each one of loudspeakers by imparting a specific delay time to an audio signal on each one of said plurality of channels (abstract; Figs. 1-4 and 8-13; column 6, lines 17-43);

a test tone generating section for generating a test tone used to measure a distance between said loudspeakers and supplying said test tone thus generated to one of said loudspeakers (abstract; Figs. 1-4 and 8-13; column 5, line 19 to column 6, line 8);

a transmission time measuring section for measuring a time period taken from a time when said test tone is generated by said one of said loudspeakers until a time when said test tone is received by other loudspeakers, thus obtaining a transmission time between loudspeakers (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 8); and

a loudspeaker position calculating section for calculating a coordinate position of each one of said loudspeakers based upon said transmission time between loudspeakers (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 55); and

a listening position input section for inputting a listening position in relation to a coordinate position calculated by said loudspeaker position calculating section (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 55)

wherein said loudspeaker position calculating section calculates a transmission time or a distance between said listening position and each one of said loudspeakers

based upon said listening position (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 55).

11. Regarding Claim 4, Cohen discloses a delay time imparted to said loudspeaker drive section is calculated based upon said transmission time or distance which is between said listening position and each loudspeaker and calculated by said loudspeaker position calculating section (abstract; Figs. 1-4 and 8-13; column 4, line 59 to column 5, line 11; column 5, line 19 to column 6, line 55).

12. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by USPAPN 20040071294 to Halgas, JR. et al. (hereafter as Halgas).

13. Regarding Claim 1, Halgas discloses a multichannel reproducing apparatus in which audio signals from a plurality of channels are processed, and processed audio signals of said plurality of channels are supplied to and reproduced on loudspeakers respectively disposed for each one of said plurality of channels, said multichannel reproducing apparatus (Figs. 2-6) comprising:

a loudspeaker drive section for driving each one of loudspeakers by imparting a specific delay time to an audio signal on each one of said plurality of channels (abstract; Figs. 2-6; page 3, paragraphs 0028-0029; page 4, paragraph 0035; pages 4-5, paragraph 0038-0041; page 6, paragraph 0044);

a test tone generating section for generating a test tone used to measure a distance between said loudspeakers and supplying said test tone thus generated to one

of said loudspeakers (abstract; Figs. 2-6; pages 3-4, paragraph 0030-0033; page 6, paragraphs 0042-0044);

a transmission time measuring section for measuring a time period taken from a time when said test tone is generated by said one of said loudspeakers until a time when said test tone is received by other loudspeakers, thus obtaining a transmission time between loudspeakers (abstract; Figs. 2-6; page 4, paragraph 0033-0035; page 6, paragraphs 0042-0044); and

a loudspeaker position calculating section for calculating a coordinate position of each one of said loudspeakers based upon said transmission time between loudspeakers (abstract; Figs. 2-6; page 4, paragraph 0033-0035; page 6, paragraphs 0042-0044).

14. Regarding Claim 2, Halgas discloses a multichannel reproducing apparatus in which audio signals from a plurality of channels are processed, and processed audio signals of said plurality of channels are supplied to and reproduced on loudspeakers respectively disposed for each one of said plurality of channels, said multichannel reproducing apparatus (Figs. 2-6) comprising:

a loudspeaker drive section for driving each one of loudspeakers by imparting a specific delay time to an audio signal on each one of said plurality of channels (abstract; Figs. 2-6; page 3, paragraphs 0028-0029; page 4, paragraph 0035; pages 4-5, paragraph 0038-0041; page 6, paragraph 0044);

a test tone generating section for generating a test tone used to measure a distance between said loudspeakers and supplying said test tone thus generated to one

of said loudspeakers (abstract; Figs. 2-6; pages 3-4, paragraph 0030-0033; page 6, paragraphs 0042-0044);

a transmission time measuring section for measuring a time period taken from a time when said test tone is generated by said one of said loudspeakers until a time when said test tone is received by other loudspeakers, thus obtaining a transmission time between loudspeakers (abstract; Figs. 2-6; page 4, paragraph 0033-0035; page 6, paragraphs 0042-0044);

a loudspeaker position calculating section for calculating a coordinate position of each one of said loudspeakers based upon said transmission time between loudspeakers (abstract; Figs. 2-6; page 4, paragraph 0033-0035; page 6, paragraphs 0042-0044) ;and

a listening position input section for inputting a listening position in relation to a coordinate position calculated by said loudspeaker position calculating section (abstract; Figs. 2-6; page 4, paragraph 0033-0035; pages 4-5, paragraph 0038-0041; page 6, paragraphs 0042-0044).

15. Regarding Claim 3, Halgas discloses a multichannel reproducing apparatus in which audio signals from a plurality of channels are processed, and processed audio signals of said plurality of channels are supplied to and reproduced on loudspeakers respectively disposed for each one of said plurality of channels, said multichannel reproducing apparatus (Figs. 2-6) comprising:

a loudspeaker drive section for driving each one of loudspeakers by imparting a specific delay time to an audio signal on each one of said plurality of channels (abstract;

Figs. 2-6; page 3, paragraphs 0028-0029; page 4, paragraph 0035; pages 4-5, paragraph 0038-0041; page 6, paragraph 0044);

a test tone generating section for generating a test tone used to measure a distance between said loudspeakers and supplying said test tone thus generated to one of said loudspeakers (abstract; Figs. 2-6; pages 3-4, paragraph 0030-0033; page 6, paragraphs 0042-0044);

a transmission time measuring section for measuring a time period taken from a time when said test tone is generated by said one of said loudspeakers until a time when said test tone is received by other loudspeakers, thus obtaining a transmission time between loudspeakers (abstract; Figs. 2-6; page 4, paragraph 0033-0035; page 6, paragraphs 0042-0044);

a loudspeaker position calculating section for calculating a coordinate position of each one of said loudspeakers based upon said transmission time between loudspeakers (abstract; Figs. 2-6; page 4, paragraph 0033-0035; page 6, paragraphs 0042-0044) ; and

a listening position input section for inputting a listening position in relation to a coordinate position calculated by said loudspeaker position calculating section (abstract; Figs. 2-6; page 4, paragraph 0033-0035; pages 4-5, paragraph 0038-0041; page 6, paragraphs 0042-0044)

wherein said loudspeaker position calculating section calculates a transmission time or a distance between said listening position and each one of said loudspeakers

based upon said listening position (abstract; Figs. 2-6; page 4, paragraph 0033-0035; pages 4-5, paragraph 0038-0041; page 6, paragraphs 0042-0044).

16. Regarding Claim 4, Halgas discloses a delay time imparted to said loudspeaker drive section is calculated based upon said transmission time or distance which is between said listening position and each loudspeaker and calculated by said loudspeaker position calculating section (abstract; Figs. 2-6; page 4, paragraph 0033-0035; pages 4-5, paragraph 0038-0041; page 6, paragraphs 0042-0044).

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 7158643 to Lavoie et al discloses an auto-calibrating surround system.

USPN 7155017 to Kim et al discloses a system and method for controlling audio signals for playback.

USPN 6954538 to Shiraishi discloses a remote control apparatus and a receiver and an audio system.

USPAPN 20020136414 to Jordan et al discloses a system and method for automatically adjusting the sound and visual parameters of a home theatre system.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 5, 2007
CPC

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